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A new species of *Sphaceloma* on *Helicia* from China

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Abstract—*Sphaceloma heliciae* sp. nov. on *Helicia formosana* is described and illustrated. The type specimen was collected from Xishuangbanna, Yunnan Province, China.

Key words—coelomycetes, identification, taxonomy

Introduction

The genus *Sphaceloma*, proposed by de Bary in 1874, contains 163 named species (Index Fungorum 2013), about 52 of which are currently accepted (Kirk et al. 2008). Many species have *Elsinoe* teleomorphic states. In China, 24 *Sphaceloma* spp. have been reported (Tai 1979; Wang et al. 1999; Guo 2001, 2005). Of the five *Sphaceloma* spp. that have been recorded on proteaceous hosts (*Elsinoe banksiae* Pascoe & Crous, *E. leucospermi* L. Swart & Crous, *E. proteae* Crous & L. Swart, *Sphaceloma banksiicola* Pascoe & Crous, and *S. protearum* L. Swart & Crous), none has been reported on *Helicia* (Swart et al. 2001; Pascoe & Crous 2007). We describe a new species found on leaves of *Helicia* from China, and distinguish it from the other five species on *Proteaceae*. The holotype specimen is conserved in Herbarium Mycologica of Yunnan Agricultural University, Kunming, China (MHYAU).

Sphaceloma heliciae H.Y. Yang & Z.Y. Zhang, **sp. nov.** Fig. 1

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Differs from the *Sphaceloma* states of *Elsinoe banksiae* and *E. leucospermi* by its shorter, narrower conidiophores and its narrower, fusiform to ovoid conidia.

Type: China, Yunnan, Xishuangbanna, in living leaves of *Helicia formosana* Hemsl. (*Proteaceae*), Dec. 2009, Li-Xin (**Holotype**, MHYAU 13083).

Etymology: referring to the host genus.

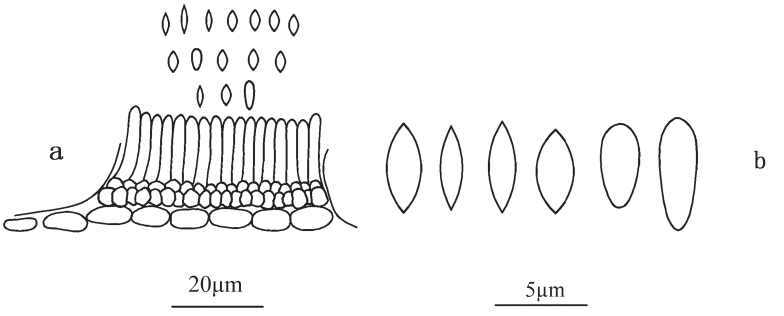

Fig. 1. *Sphaceloma heliciae* (holotype, MHYAU 13083): A. acervulus; B. conidia.

Scabs subrotund, amphigenous, ochroleucous, prominent, 0.8 × 1 mm. Acervuli subcuticular, scattered or aggregated, 31.0 × 51.7 μm, composed of cornuted cells, hyaline to brown. Conidiophores compactly arranged, continuous, hyaline, 13.1–23.9 × 1.7–3.5 μm. Conidia fusiform, ovoid or occasionally cylindrical, continuous, hyaline, 4.6–6.2 × 1.3–2.1 μm.

Discussion

The hosts and morphology of *Sphaceloma heliciae* and the five other species on proteaceous hosts are presented in Table 1. In addition to their association with different host genera, the five other species differ morphologically from *S. heliciae* by their broader ellipsoidal conidia and by either their broader conidiophores (*Elsinoe banksiae*, *E. leucospermi*, *S. banksiicola*, and *S. protearum*) or their lack of extended conidiophores (*E. proteae*).

Table 1. Host associations and morphology of *Sphaceloma*/*Elsinoe* species on proteaceous hosts.

Species	Host	Conidiophores (μm)	Conidia (μm)
E. banksiae	*Banksia serrata*	20–30 × 3–5 subcylindrical	4–6 × 2–3 ellipsoid
E. leucospermi	*Leucospermum cordifolium*	20–30 × 3–6 subcylindrical	5–7 × 2.5–3 ellipsoid
E. proteae	*Protea cynaroides*	reduced to conidiogenous cells	hjnnb
S. protearum	*Protea eximia*	12–20 × 5–6 subcylindrical	5–6 × 2–2. 5 ellipsoid
S. banksiicola	*Banksia prionotes*	8–20 × 3–5 subcylindrical	8–9 × 2.5–4 ellipsoid
S. heliciae	*Helicia formosana*	13–23 × 0.7–3.5 subcylindrical	4.6–6.2 × 1.3–2.1 fusiform to ovoid

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